

Traditional knowledge is the light of wisdom for conserving biodiversity and adapting to climate change

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Abstract

The Tibetan traditional language not only contains the worldview of the Tibetan people, but also holds significant traditional ecological knowledge that can show us alternatives to conserve biodiversity and adapt to climate change. For indigenous peoples and local communities biodiversity is not only a matter of resource, but also a social and cultural phenomenon. And the impact of climate change on biodiversity is not only an environmental problem, but also an issue of spirit and belief.

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² Miss Xiaohan Zhang is originally from Bai ethnic minority people in Yunnan Province, southwest of China. The Bai ethnic minority group has a population of 1,858,063. Eighty percent are living in communities in the Dali Bai Autonomous Prefecture in Yunnan Province. The Bai people speak their own unique language. As part of the young generation, Xiaohan has a strong interest in inheriting the language and culture of her own people, so she volunteered to participate in the project of the Center for Biodiversity and Indigenous Knowledge (CBIK), which focus on the traditional culture and language of ethnic minorities related to environmental protection.

Key-words: Indigenous language, traditional ecological knowledge, climate change, Tibet.

Resumo

A língua tradicional tibetana não contém apenas a visão de mundo do povo tibetano como também inclui conhecimentos tradicionais ecológicos significativos que podem indicar alternativas para a conservação da biodiversidades e adaptação à mudança climática. Para os povos indígenas e comunidades locais a biodiversidade não é apenas uma questão de recursos, mas um fenômeno social e cultural. E o impacto da mudança climática sobre a biodiversidade não é apenas um problema ambiental, senão uma questão de espiritualidade e crença.

Palavras chave: Língua indígena, conhecimento tradicional ecológico, mudança climática, Tibet.

In 2007, with the support of the United Nations Development Programme Asia-Pacific Regional Centre, I carried out the research project "Impacts of Climate Change on Traditional Livelihoods and Adaptation of Local Tibetan Peoples in Eastern Himalaya of Northwest Yunnan, China." So, I came to the local village and began to work and live with the Tibetan people. This project focuses on the impact of climate change on livelihoods and how traditional knowledge can help local Tibetan people to adapt to the impact of climate change so as to further realize their sustainable development of livelihoods. In order to achieve this goal, the first step was to investigate the traditional knowledge of the local Tibetans. In this process, I found that traditional knowledge was not only rich and diverse, but also had a highly significant value.

For example, I realized that the traditional language is the wisdom light of traditional knowledge. The traditional language not only contains the Tibetan worldview and their understanding of Mother Nature, but also has a close relationship with biodiversity, especially the traditional language of bio-species and genetic resources.

The eastern Himalaya region is a hotspot of biodiversity in the world, and also a place rich in cultural diversity. The Tibetan peoples living there for generations are engaged in the traditional livelihoods such as agro-pastoralism and collection of

non-timber forest products (NTFP). They have produced rich traditional knowledge, including traditional languages. In agro-pastoralism, cattle are the main livestock for animal husbandry and grazing, while highland barley is the main crop for traditional farming. In the collection of NTFP, various *fungi* are the main collection objects. Therefore, the various names or appellations for cattle, highland barley and *fungi* in the local traditional language are particularly rich, even exceeding the scientific classification.

We first learnt about the appellation of cattle in the traditional language and the knowledge behind it. As for the classification of local cattle breeds, scientific terms mainly include *Bos mutus* and *Bos taurus*. In English, they are called yak, oxen and cattle yak. However, the appellation of cattle in local traditional languages is far more than scientific appellation and English appellation, with a total of more than ten appellations, reflecting that the classification system of cattle by local people is very complex, and these classification standards contain climate related traditional knowledge: some cattle adapt to cold, some to drought, some to heat, some to humidity and so on.

The next lesson was on the appellation of highland barley in the traditional language, as well as the knowledge hidden behind it. Similar to the appellation of cattle, the appellation of highland barley in the local language is very rich and complex, far more than the scientific appellation of *Hordeum vulgare* Linn. var. *nudum* Hook.f., or the English appellation of Hulless barley. The appellation of different types of highland barley also contains traditional knowledge related to climate: some highland barley adapts to cold; some adapts to drought; some adapts to heat while others adapts to humidity and so on.

The third lesson was about the different names given to *fungi* in the traditional language and the knowledge behind it. Fungus collection is the main source of economic income for local villagers' families. They collect fungus in different altitudes, seasons and types of forests all the year round. Therefore, the appellation of fungus in traditional languages is also very rich, and the division is very complex, which also contains traditional knowledge related to climate.

I also find it very interesting to look at the traditional language from the perspective of gender. For example, the main labor force of animal husbandry was male, so men were more familiar with the appellation, classification and knowledge of cattle. On the other hand, the main labor force of collection of NTFP was female, so women

were more familiar with the appellation, classification and knowledge of fungi. In the case of cattle, men and women were the main labor force, so they have both mastered the appellation, classification and knowledge around it.

In the context of the traditional language and knowledge survey, I began to implement the community-based climate change and sustainable livelihood development project, which was exactly the basis of traditional language and knowledge. Traditional knowledge was then classified from a community-based perspective. The traditional knowledge was divided into six categories, namely:

- 1.** The knowledge for traditional language of bio-species and genetic resources;
- 2.** The knowledge for traditional use of agricultural bio-species and genetic resources;
- 3.** The knowledge for traditional use of medicinal bio-species;
- 4.** Traditional technical innovations for bio-resource use and traditional practices for farming and living styles;
- 5.** Traditional cultures such as customary laws and community protocols that are related to conservation and sustainable use of bio-resources;
- 6.** Traditional geographically biological indicators.

Before, I never thought that my climate change, traditional knowledge and biodiversity projects in remote Tibetan villages in the Eastern Himalayas would attract international attention until I received an invitation letter from The Paris Peace Forum in 2019. In the letter, the Paris Peace Forum announced that my project stands out from more than 700 global candidate projects and became the showcase project of the second Paris Peace Forum in November 2019.

I think this was a good opportunity to show to the public the value of traditional knowledge and language in protecting biodiversity and coping with climate change. What I didn't expect was that at the Paris Peace Forum, many politicians showed special attention to my project: in addition to the attention received by the Secretary General of the United Nations, António Manuel de Oliveira Guterres GCC GCL, other politicians such as Mr. Félix Tshisekedi, President of the Democratic Republic of the Congo, Mrs. Sophie Wilmes, Prime Minister of Belgium, and Mr. Jean Pierre Raffarin, President-Former Prime Minister of France also expressed their special interest in our project and visited our project Stand (Traditional Knowledge for Climate Change). They learned more about the importance of preserving the

biodiversity based on the traditional knowledge in order to tackle the effects of climate change. At the same time, relevant media including French TV5MONDE, TV2, China Xinhua news agency and China International TV also interviewed us.

The message we wanted to spread to the public was: climate change is affecting the indigenous peoples and local communities around the world. We need to work together for the conservation of our Biodiversity, for mutual coexistence of people and environment. In this process, traditional knowledge and language can play an important role.

Indigenous peoples and local communities have rich knowledge of biodiversity and for them biodiversity is not only a resource problem, but also a social and cultural phenomenon. And the impact of climate change on biodiversity resources is not only an environmental problem, but also an issue of spirit and belief.

Local indigenous language, perception and traditional knowledge can improve our understanding of the influence of climate change on biodiversity, and provide ideas to develop an equitable and effective biodiversity conservation plan to adapt to climate change. When indigenous peoples and local communities analyse the externally driven adaptation options, they are more willing to take the community-based biodiversity conservation plan, because such a plan will enable them to apply their traditional knowledge according to the geographical location and the environment of their areas, so that their actions to adapt to climate change will more effective.

In spite of the null or low concern of governments at the negotiating table, or of the charts, graphs, models and formulae compiled by scientists, the vast traditional knowledge held by indigenous peoples and local communities on climate change is the means they rely on for survival and development. Their traditional knowledge and experience may not be "scientific", but nevertheless represents a shining beacon of wisdom. Traditional knowledge of indigenous peoples and local communities provides local adaptation strategies in responding to the global climate change. However, in the context of the impact of climate change on indigenous peoples and local communities around the world, local adaptation strategies of different regions also contain a global perspective.

Traditional knowledge and language are the light of wisdom for conserving biodiversity in the context of climate change!